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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,921	03/18/2004	David J. Lee	05165.1400	5426

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EXAMINER	
OCHOA, JUAN CARLOS	
ART UNIT	**PAPER NUMBER**
2123	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/12/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/802,921	LEE ET AL.	
	Examiner	Art Unit	
	Juan C. Ochoa	2123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-68* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-68* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *18 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1–68 are presented for examination.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:
Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 27–34 and 61–68 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

4. Specifically, claims 27 and 61 do not produce a useful, concrete and tangible result. Claims 27 and 61 are not actually doing anything; they are just capable of imparting functionality.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1–6, 10–14, 18–23, 27–31, 35–40, 44–48, 52–57, and 61–65 are rejected under 35 U.S.C. 102(e) as being anticipated by Noma et al. (Noma hereinafter), Pre–Grant publication 20040010398.

7. As to claim 1, Noma discloses a computer-implemented system for designing an interior section of a passenger vehicle to accommodate objects for the interior section of

the passenger vehicle (see paragraph [0005], lines 9–16), comprising a) a database comprising a digital definition of the interior section of the passenger vehicle and parameters related to the objects (see paragraph [0203]); b) a computer-aided design system configured to display a visual model of the interior section of the passenger vehicle (see paragraph [0075], last line); c) a user interface capable of receiving user input from a user reflecting a first change to the interior section of the passenger vehicle (see paragraph [0075], next to last line); d) a processor responsive to the user input by using said digital definition and said parameters to (i) determine whether a second change to the interior section of the passenger vehicle is necessary because of the first change to the interior section of the passenger vehicle, and (ii) execute the second change to the interior section of the passenger vehicle by updating said digital definition (see Fig. 26, item Nos. S14, S15, and S17).

8. As to claim 35, Noma discloses a computer-implemented system for designing a configurable space to accommodate objects for the interior section of the passenger vehicle (see paragraph [0005], lines 9–16), comprising a) a database comprising a digital definition of the interior section of the passenger vehicle and parameters related to the objects (see paragraph [0203]); b) a computer-aided design system configured to display a visual model of the interior section of the passenger vehicle (see paragraph [0075], last line); c) a user interface capable of receiving user input from a user reflecting a first change to the interior section of the passenger vehicle (see paragraph [0075], next to last line); d) a processor responsive to the user input by using said digital definition and said parameters to (i) determine whether a second change to the interior

section of the passenger vehicle is necessary because of the first change to the interior section of the passenger vehicle, and (ii) execute the second change to the interior section of the passenger vehicle by updating said digital definition (see Fig. 26, item Nos. S14, S15, and S17).

9. As to claim 52, Noma discloses a computer-implemented system for designing a configurable space to accommodate objects for the interior section of the passenger vehicle (see paragraph [0005], lines 9–16), comprising a) means for storing a digital definition of the configurable space and parameters related to the objects (see paragraph [0203]); b) means for displaying a visual model of the configurable space (see paragraph [0075], last line); c) means for receiving user input from a user reflecting a first change to the configurable space (see paragraph [0075], next to last line); d) means for determining in response to the user input and said digital definition whether a second change to the configurable space is necessary because of the first change to the configurable space and e) means for executing the second change to the configurable space by updating said digital definition (see Fig. 26, item Nos. S14, S15, and S17).

10. As to claim 61, Noma discloses a computer-readable medium comprising code capable of instructing a computer to perform a method for designing a configurable space to accommodate objects for the configurable space (see paragraph [0005], lines 9–16), said method comprising the steps of: a) storing a digital definition of the configurable space and parameters related to the objects (see paragraph [0203]); b) displaying a visual model of the configurable space (see paragraph [0075], last line); c)

receiving user input from a user reflecting a first change to the configurable space (see paragraph [0075], next to last line); d) determining in response to the user input and said digital definition and parameters whether a second change to the configurable space is necessary because of the first change to the configurable space and e) executing the second change to the configurable space by updating said digital definition. (See Fig. 26, item Nos. S14, S15, and S17).

11. As to claims 2, 36, 53, and 62, Noma discloses a system wherein said digital definition comprises a plurality of data objects representing different aspects of the interior/configurable space (see paragraph [0203]).

12. As to claims 3, 37, 54, and 63, Noma discloses a system wherein a first one of said data objects contains information regarding a second data object representing an aspect of the interior/configurable space that has a relationship with an aspect of the interior/configurable space represented by said first data object (see paragraph [0312]).

13. As to claims 4, 38, 55, and 64, Noma discloses a system wherein said processor is capable of modifying said second data object in response to a change made by the system to said first data object, and said processor uses said information regarding said second data object to determine whether said second data object should be modified (see paragraph [0313]).

14. As to claims 5, 39, 56, and 65, Noma discloses a system wherein each of said data objects has one of a plurality of types, and a first of said types represents a first portion of the vehicle/configurable space that is fully contained within a second portion

of the vehicle/configurable space represented by a second of said types (see paragraphs [0317] and [0318]).

15. As to claims 6, 40, and 57, Noma discloses a system wherein said processor is capable of responding to a change to a data object having said first type and said processor is capable of responding to a change to a data object having said second type (see paragraphs [0317] and [0318]).

16. As to claims 10–14 and 27–31, these claims recite a method and a computer-readable medium comprising code capable of instructing a computer to perform a method performed by the system of claims 1–5. Noma discloses a method (see paragraph [0001]) performed by the system that anticipates claims 1–5. Therefore, claims 10–14 and 27–31 are rejected for the same reasons given above.

17. As to claims 18–23, these claims recite a method performed by the system of claims 1–6. Noma discloses a method (see paragraph [0001]) performed by the system that anticipates claims 1–6. Therefore, claims 18–23 are rejected for the same reasons given above.

18. As to claims 44–48, these claims recite a method performed by the system of claims 35–39. Noma discloses a method (see paragraph [0001]) performed by the system that anticipates claims 35–39. Therefore, claims 44–48 are rejected for the same reasons given above.

Claim Rejections - 35 USC § 103

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

20. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

21. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

22. Claims 8, 9, 16, 17, 25, 26, 33, 34, 42, 43, 50, 51, 59, 60, 67, and 68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noma as applied to claims 1, 10, 18, 27, 35, 44, 52, and 61 above, taken in view of Robert Brauer, (Brauer hereinafter), U.S. Patent 5,611,503.

23. As to claims 8, 42, 59, and 67, while Noma discloses designing an interior section of a passenger vehicle to accommodate objects for the interior section of the passenger vehicle, Noma fails to disclose determining the maximum number of seats that can fit in a section of the interior/configurable space.

24. Brauer discloses a system further comprising a means for determining the maximum number of seats that can fit in a section of the interior/configurable space, based on said parameters and the location of other objects in the interior (see claim 13).

25. Noma and Brauer are analogous art because they are both related to arrangement of passenger seats in an airplane/vehicle.

26. Therefore, it would have been obvious to one of ordinary skill in this art at the time of invention by applicant to utilize the determination of maximum number of seats of Brauer in the system of Noma because Brauer develops a method for increasing passenger seating comfort at typical load factors, relative to that achieved using his prior art with seats of substantially equal dimensions and in an airplane of fixed dimensions with a fixed number of seats (see col. 2, lines 18–26), and as a result, Brauer reports the following improvements over his prior art: producing seating configurations fully compliant with applicable FAA regulations, and seating arrangements which are more comfortable for passengers in an airplane of fixed dimensions and seat type at typical load factors because more passengers are seated next to an empty seat (see col. 16, line 64 to col. 17, line 4).

27. As to claims 9, 43, 60, and 68 Brauer discloses a system further comprising a means for determining a course of action that, if taken, will allow the addition of one extra row of seats, while maintaining compliance with said parameters (see claim 13).

28. As to claims 16, 17, 25, 26, 33, and 34, these claims recite a method and a computer-readable medium comprising code capable of instructing a computer to perform a method performed by the system of claims 8 and 9. Noma discloses a method (see paragraph [0001]) performed by the system that teaches claims 1–5. Therefore, claims 16, 17, 25, 26, 33, and 34 are rejected for the same reasons given above.

29. As to claims 50 and 51, these claims recite a method performed by the system of claims 42 and 43. Noma discloses a method (see paragraph [0001]) performed by the system that teaches claims 42 and 43. Therefore, claims 50 and 51 are rejected for the same reasons given above.

30. Claims 7, 15, 24, 32, 41, 49, 58, and 66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noma as applied to claims 1, 10, 18, 27, 35, 44, 52, and 61 above, taken in view of Lohmann et al., (Lohmann hereinafter), Pre–Grant publication 20020026296.

31. As to claims 7, 41, 58, and 66, while Noma discloses designing an interior section of a passenger vehicle to accommodate objects for the interior section of the passenger vehicle, Noma fails to disclose exporting a portion of the contents of said database in a format that can be used with/by a computer-aided design system different from said computer aided design system of said system.

32. Lohmann discloses a system further comprising a means for exporting a portion of the contents of said database in a format that can be used with/by a computer-aided design system different from said computer aided design system of said system (see paragraph [0030], lines 1–12).

33. Noma and Lohmann are analogous art because they are both related to arrangement of passenger seats in an airplane/vehicle.

34. Therefore, it would have been obvious to one of ordinary skill in this art at the time of invention by applicant to utilize the feature of Lohmann in the system of Noma because Lohmann develops a method whereby production documents (such as drawings, parts lists, supplementing or completing evaluations, e.g. device and equipment lists or mass distribution plans) are automatically prepared (see paragraph [0008]), and as a result, Lohmann reports the following improvements over his prior art: automatically define the spatial arrangement of structural components relative to each other, and the optimization thereof with respect to their functional positions (for example the visibility and/or reachability of components that must be accessed by passengers) and/or with respect to regulations and other requirements limiting the allowable arrangements, and/or with respect to the quantity or number of the components, i.e. an automated method in which the constantly repeated special knowledge of the designer and builder of a component arrangement (such as an aircraft cabin) is formulated as a system of data and rules, which is then documented and can be repeatedly called-up and applied as needed in an automated manner for repetitious similar applications or

other applications that share similar components, restrictions, and the like (see paragraph [0032]).

35. As to claims 15, 24, and 32, these claims recite a method and a computer-readable medium comprising code capable of instructing a computer to perform a method performed by the system of claim 7. Noma discloses a method (see paragraph [0001]) performed by the system that teaches claim 7. Therefore, claims 15, 24, and 32 are rejected for the same reasons given above.

36. As to claim 49, this claim recites a method performed by the system of claim 41. Noma discloses a method (see paragraph [0001]) performed by the system that teaches claim 41. Therefore, claim 49 is rejected for the same reasons given above.

Conclusion

37. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

38. Pre–Grant publication 20020161563 Elabiad et al. teaches a vehicle configurator for configuring the interior of a vehicle characterized by a vehicle type and a database storing a plurality of predetermined validation criteria (see paragraph [0025]).

39. Pre–Grant publication 20030018454 Winkler et al. teaches and interface configured to accept from a user changes to the environment design and body models and a processor further configured to modify the design and the body models in accordance with the user changes (see page 1, col. 2, 1st paragraph).

40. U.S. Patent 6,113,644 Weber et al. teaches occupant reach based vehicle design (see col. 1, lines 7–8), in which occupant reach may be determined in many

ways, for example generating reach geometries, including distances, surfaces, and zones (see col. 6, lines 10–21).

41. Examiner would like to point out that any reference to specific figures, columns and lines should not be considered limiting in any way, the entire reference is considered to provide disclosure relating to the claimed invention.

42. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juan C. Ochoa whose telephone number is (571) 272-2625. The examiner can normally be reached on 7:30AM - 4:00 PM.

43. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Rodriguez can be reached on (571) 272-3753. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

44. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

*** 3/8/07

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3/9/07